

Some Short and Important Explications about Semiotics

Algumas Breves e Importantes Explicações Sobre Semiótica

Michael Friedrich Otte^{*ab}; Alexandre Silva Abido^b; Luiz Gonzaga Xavier de Barros^c; Luciene de Paula^b; Geslane Figueiredo da Silva Santana^d

^aUniversity of Goettingen and Munster University (Alemanha).

^bFederal University of Mato Grosso. MT, Brasil.

^cUniversity Anhanguera of São Paulo. SP, Brasil.

^dScience and Mathematics Education, Federal University of Mato Grosso. MT, Brasil.

*E-mail: michaelontra@aol.com

Abstract

That language is essential to the human nature has never been doubted. However, nowadays it becomes more and more obvious that language is not enough to characterize our destinations, because the relationship between nature and society seem essential when reflecting on the development or destination of humanity. Starting from the belief that semiotics provides the basis of a new conceptualization and understanding of humanity in its relations to nature as well as within the context of social history this paper tries to introduce some related semiotic concepts and provide basic orientations for further research in the philosophy of science as well as cognitive theory.

Keywords: Saussure. Peirce. Semiotics. Complementarity of intension and extension.

Resumo

Que a linguagem é essencial para a natureza humana jamais foi posta em dúvida. No entanto, atualmente torna-se cada vez mais evidente que a linguagem não é suficiente para caracterizar nossos destinos, pois a relação entre natureza e sociedade parece essencial para refletir sobre o desenvolvimento ou destino da humanidade. Partindo da crença de que a semiótica fornece a base de uma nova conceituação e compreensão da humanidade em suas relações com a natureza, bem como dentro do contexto da história social, este artigo busca introduzir alguns conceitos semióticos relacionados e fornecer orientações básicas para futuras pesquisas na filosofia da ciência, assim como na teoria cognitiva.

Palavras-chave: Saussure. Peirce. Semiótica. Complementaridade de intensão e extensão.

1 Introduction

Many of to-day's students work on projects that seem really interdisciplinary. Semiotics might facilitate their efforts and their understanding and offer opportunities to achieve better results. John Deely (1982, pp.xv-xvi) writes:

Whereas the rise of modern science brought about the conditions requiring a new kind of specialization that gradually has led to an atomization of research and fragmentation of intellectual community, recognized by all as counterproductive, *semiotic* can establish new conditions of a common framework and cross-disciplinary channels of communication that will restore to the humanities the interdisciplinary possibilities that have withered so alarmingly when scientific specialization knew no check and alternative.

2 Different Semiotic Theories

Two major theories describe the way signs acquire the ability to transfer information. Both theories understand the defining property of the sign as a relation between a number of elements.

In the tradition of semiotics developed by Ferdinand de Saussure (1857-1913), referred to as semiology, the sign relation is dyadic, consisting only of a form of the sign (the signifier) and its meaning (the signified). Saussure saw

this relation as being essentially arbitrary (the principle of *semiotic arbitrariness*). Linguistic signs are arbitrary insofar as there is no direct link between the form (*signifiant*) and the meaning (*signifié*) of a sign. The relation is motivated only by social convention. Saussure's theory has been particularly influential in the study of the *linguistic sign* and had been given preference in the humanities and in logics. This approach to the sign seems especially consistent with the idealistic belief that human thought has no access except to its own creations and it thus keeps apart the natural sciences and the humanities.

The other semiotic theory, developed by Charles Sanders Peirce (1839-1914), defines the sign as a triadic relation as "something that stands for something, to someone in some capacity" (Peirce, CP 2.228). This means that a sign is a relation between the sign vehicle (the specific physical form of the sign), a sign object (the aspect of the world that the sign carries meaning about) and an interpretant, that is, the meaning of the sign as understood by an interpreter. But we should remember that to interpret something just means to represent it in a new way, therefore Peirce speaks of the *interpretant*. The essence of something is nothing, but the essence of a representation of that thing. We can ask neither for the ultimate referent, nor for the definite meaning of a sign.

And therefore, the semiosis stretches out in both directions, towards the object – there is no definite referent – as well as towards the interpretant – there is no final and definite interpretation either and the interpretant is just a translation or further development of the original sign.

Peirce accordingly distinguishes between two objects of the sign, “the *immediate object*, or the object as the sign represents it, from the *dynamical object* or really efficient but not immediately present object” (Peirce, CP 8.343). And we should also distinguish between the immediate interpretant and a possible final interpretation in the future.

It is commonly assumed that signs are instruments invented and used for certain purposes. But Peirce introduced the term “semiosis” to challenge such a perspective. Peirce assigned to the sign the notion of a triadic relation in which there are three terms. What we ordinarily call the sign, the object signified and an interpretant by which the sign represents its significate to some mind. In other words, there must be some general notion that establishes the semiotic process, because the sign stands for its object not in all respects, but in reference “to a sort of *Idea*, the ground of the representamen” (Peirce, CP 2.228). And the notion of a general involves the imagination of a continuum of possible individuals (Peirce, CP 5.102).

According to Peirce signs can be basically divided by the type of relation that holds the sign relation together as either *icons*, *indices* or *symbols*. The fundamental triad in Peirce’s semiotics is thus “object – sign – interpretant” (Peirce CP 8.361). Icons are those signs that signify by means of similarity between sign vehicle and sign object (e.g. a portrait, or a map), indices are those that signify by means of a direct relation of contiguity or causality between sign vehicle and sign object (e.g. a symptom), and symbols are those that signify through a law or arbitrary social convention.

In the world at large there are objects and signs, while in the communicative world of Saussure there only signs. Saussure’s preferences are understandable, because he was a linguist and the object of his interest was language. But Peirce, being a logician or logical philosopher, like Frege, nevertheless differed from Frege by not closing off his mind from contacts with knowledge about mind-independent realities. To Peirce logic was a doctrine of signs in general, rather than a “universal language”, like for Frege. Peirce took a master-degree in chemistry, after all, and he served and did a lot work for the American Coast Survey (Brent, 1993).

Frege assigned to logic the task of representing *truth* as its characteristic object and trying to conceive of how human thought might apply to reality conceives of objective existence as a second order predicate. McGinn (2000, p.18) illustrates this view of existence as follows: “When you think that tigers exist you do not think of certain feline objects that each has the property of existence; rather, you think, of the property of tiger-hood, that it has instances. [...] The concept of an object existing simply is the concept of a property having instances.”

Frege himself trying to explain the universal applicability of numbers claims that the content of a statement of number is an assertion about a concept in the sense explained by McGinn. Frege (1884, § 46) said:

If I say ‘Venus has 0 moons’, there simply does not exist any moon or agglomeration for asserting anything of; but what happens is that a property is assigned to the *concept* ‘moon of Venus’, namely that of including nothing under it. If I say, ‘the King’s carriage is drawn by four horses’, then I assign the number four to the concept ‘horse that draws the King’s carriage’.

Several kinds of objections may be brought forward against this view of existence. First, one cannot define existence in this way: “Since the notion of instantiation must be taken to have existence built into it – it must be *existent* things that instantiate the property” (McGinn, 2000, p.22).

3 Things and Signs

If somebody sees smoke soar up into the sky, she concludes that there must be a fire near. Everybody having this experience comes to the very same conclusion. If somebody tells an English-speaking person *Sobe fumaça lá* the hearer might not be able to get the message if she/he does not speak Portuguese.

The smoke itself could be seen as an object or as a sign. Already St. Augustine (353-430) about 2000 years ago begins his treatise on *Christian Doctrine* by starting from the duality of things and signs, or rather from their complementarity, because a thing, like smoke may become a sign and may function by bringing some message. Suppose Robinson had seen some broken twigs in the woods of his island. Would he think this to be a sign? At first not, especially so, because he thinks of himself as the only person on this isolated island!

Les branches restent des objets auxquels je n’attribue que peu d’attention. Mais si dans ma course cela arrive encore et encore, et que l’évènement a une certaine persistance, alors je vais concevoir les branches come des signes et non seulement comme des objets. La pensée même qui constitué un signe l’emporte sur la signification du signe et est elle-même un signe, étant donne, que the meaning of a sign is the sign it has to be translated into Peirce CP 4.132. (Otte, 1995, p.94).

St. Augustine (1958, in book IV, chap.2) too starts from the things and the signs. He writes:

All instruction is either about things or about signs, but things are learnt by means of signs. I now use the word thing in a strict sense to signify that which is never employed as a sign of anything else: for example, wood, stone, cattle and other things of that kind. Not however the wood which we read Moses cast into the bitter waters to make them sweet, nor the stone which Jacob use as a pillow, nor the ram which Abraham offered up instead of his son, for these although they are things are also signs of other things. There are signs of another kind those which are never employed except as signs: for example, words.

Augustine (1958, in book II, chap.1) defines the notion of a sign:

A sign is a thing which over and above the impression it

makes on the senses, causes something else to come to mind as a consequence of itself: as when we see a footprint, we conclude that an animal whose footprint this is has passed by [...] And when we hear the voice of a living man, we think of the feeling in his mind, and when the trumpet sounds, soldiers know that they are to advance or retreat [...] Now some signs are natural, others a conventional.

Augustine then introduces a whole series of distinctions covering practically the entire range of semiotic phenomena.

To give a similar explanation the linguist Edward Finegan (2013, p.8) wrote about the difference between nonarbitrary and arbitrary semiotic signs through an observation of a mother and son burning rice. "Imagine a parent trying to catch a few minutes of the televised evening news while preparing dinner," he writes. "Suddenly a strong aroma of burning rice wafts into the TV room. This *nonarbitrary sign* will send the parent scurrying to salvage dinner."

The little boy present, watching TV might also signal to his mother that the rice is burning by saying something like "The rice is burning!" However, Finegan (2013, p.8) argues that while the utterance is likely to elicit the same result of the mother checking on her cooking, the words themselves are arbitrary – it is "a set of facts about *English* (not about burning rice) that enables the utterance to alert the parent," which makes the utterance an arbitrary sign.

But even the utterance of the boy contains a non-linguistic indication, namely the knowledge that cooking is done at the fire-place in the kitchen. Indices are necessary to fix references. Where is the fire?

The difference between things and signs, or between pointing and describing could be further illustrated through the following example:

A tourist to the Brazilian Pantanal has been told, for example, that the brownish animal he is seeing alongside that river, is called *Capivara*. This word, however, does not connote any meaning to him at first. After some time, the tourist may observe some characteristics and habits of the *Capivara*, and then will be able to say, "*Capivaras* are good swimmers and divers", or "the *Capivara* lives in family groups", etc. Gradually, the name is transformed into a definition, that is into a bundle of characteristics. From that moment onwards the word *Capivara* becomes used attributively and it is transformed into a description. And indeed, terms or theories *in statu nascendi* are mainly used 'referentially' by their exponents as well as by their opponents, while having reached their zenith, they are used 'attributively', until a new theory emerges and ascends to its zenith, when the former theory is used 'referentially'.

Logicians like Frege or philosophers and linguists like Wittgenstein or John Searle, deny the distinction between attributive and referential uses of signs. So, let us ask with John Searle, "Is there a distinction between referential and attributive uses of labels?" (Searle, 1979, p.137).

John R. Searle denies this. He believes that all the reality

about which we are supposed to speak has already been substituted by a representation of it. Searle is right as soon as we assume a descriptive theory of reference. But Searle makes a stronger claim. He believes that the distinction of attributive and referential descriptions is made on account of the claim that definite descriptions have an ambiguity, in so far as they are used in a twofold sense, to refer as well as to describe.

One might say: "That man over there with the champagne in his glass is happy".

Searle explains: "Suppose the man over there only had water in his glass; still what I said might be true of that *man over there*, even though the definite description I used to identify him is not true of him" (Searle, 1979, p.146).

In this situation the difference of referential and attributive use consists only in the circumstance that "in the cases of the so-called referential use the reference is made under a secondary aspect and in the so-called attributive cases it is made under a primary aspect" (Searle, 1979, p.150).

The suggestion, "Go and congratulate him", would apply to the man I am seeing over there, even though the description I have been given of him, is incorrect. But the situation is different and the function of the phrase *the man with the champagne in his glass* changes as soon as I am told: "Go inside the house and look for the man with a glass of champagne in his hands and do this or that..."

In this case again there might not be any man with a glass of champagne inside the house. And as the description is the only means to identify the man, I might not be able to do what I have been told.

In the first case the phrase "with the glass of champagne" is secondary and I would be able to meet the man because of the direct indication, while in the second case it is of primary importance that my description is correct and is part of a referring description. What Searle wants to say is, that the words "with the glass of champagne" are used descriptively in both cases and this is correct. But their function depends on whether they represent some truth or not. In addition, the actual reference is established even in Searle's example by pointing at that man, rather than identifying him just descriptively.

Frege too – following Leibniz – believes that all references are established by means of descriptions. As a consequence, Frege interpreted an equation $A = B$ exclusively as a relation between signs, not between objects. The meaning of a sign or representation is considered as a perspective (among others) on some object, or as, as Frege puts it, as "mode of presentation of an object". In Frege's famous essay on *Sinn und Bedeutung*, the author quotes some examples from elementary geometry. Frege writes:

"Let a , b , c be the lines connecting the vertices of a triangle with the midpoints of the opposite sides. The point of intersection of a and b is then the same as the point of intersection of b and c . So, we have different designations for the same point, and these names ('point of intersection of a and b '; 'point of intersection of b and c ') likewise indicate the

mode of presentation, and hence the statement contains actual knowledge". (Frege, 1969, p.40).

However, a description like '*point of intersection of b and c*' does only work because indices like *b* or *c* are employed.

And Wittgenstein, being a faithful student of Frege, follows him. In his very famous *Tractatus Logico-Philosophicus*, first published in 1922, Wittgenstein maintained, for example, that, "the world is the totality of facts, not of things. The world is determined by the facts. The facts in logical space are the world" (Wittgenstein, 2001, p.5).

And Wittgenstein concluded that if there were no language there would be no logic. And this would mean that there was no necessity, since all necessity is logical or linguistic necessity.

Wittgenstein's friend Frank Ramsey pointed out to him, however, that the impossibility of a particle being in two places at the same time expresses a feature of the world, rather than of language. This means that the relations which constitute the logical space of nature, or the empirical world, are different in kind from the normative relations that constitute the logical space of language and reasoning.

Mathematics is no language, because indices are absolutely necessary to fix references. Indices are not parts of language, but require that people share a common objective world. Peirce writes:

One might think, that there would be no use for indices in pure mathematics, dealing, as it does, with ideal creations, without regard to whether they are anywhere realized or not. But the imaginary constructions of the mathematician, and even dreams, are so far approximate to reality as to have a certain degree of fixity, in consequence of which they can be recognized and identified as individuals (Peirce, CP, 2.305).

The indices occurring in pure mathematics refer to entities or objects that belong to a model, rather than to "the real world", that is, they indicate objects in constructed semantic universes. It is exactly this indispensability of indices that Frank Ramsey was pointing out to Wittgenstein.

In summary we may say that the complementarity of meaning and reference, of intensional and extensional aspects of representations seems fundamental being present in all the arts and sciences, such that they all become fit to express fundamental tendencies of human feeling and cognition. The notion of complementarity is of course, already included in Charles Peirce's notion of *Thirdness*. We shall come to this in the next section.

4 Peirce's Triadic Conception of Sign

Peirce's triadic conception of a sign indicates an inherently dynamic sign process that is not controlled by an external human agent according to his wishes.

For example, the process of communication is not constituted by the encounter of independent actors, who decide to tell each other whatever comes to their minds. Rather communication is a social system, a system that does

not directly interact with the person's minds or consciousness and that is not arbitrarily constructed by the participants. The human agents are subsystems, or rather they have to constitute themselves as such subsystems of the larger social system of communication. Peirce uses the phrase "man is a sign" to describe this situation. He wrote as follows:

Man makes the word. [...] But since man can think only by means of words or other external symbols, these might turn round and say: 'You mean nothing which we have not taught you, and then only so far as you address some word as the interpretant of your thought'. [...] The word or sign which man uses is the man himself. For as the fact that every thought is a sign, taken in conjunction that life is a train of thought, proves that man is a sign (Peirce, CP 5.313-314)

Peirce fuses together the two poles of the classical semiotic heritage, the epistemologically focused tradition that studies the indicative sign and the linguistically grounded tradition that studies the conventional symbol. Peirce tried to capture the structure of our possible experience by three fundamental categories, which he called, in order to avoid premature reification, by completely abstract names, *Firstness*, *Secondness*, and *Thirdness*.

So, what is *Thirdness*? In his lectures on Pragmatism of 1903 Peirce explained: "Thirdness, as I use the term, is only a synonym for Representation" (CP 5.105). Thirdness is semiotic mediation, "the mode of being of that which is such as it is, in 'bringing a second and first into relation to each other'" (CP 8.328). On a different occasion Peirce writes: "Thirdness is the triadic relation existing between a sign, its object and the interpreting thought, [...] considered as constituting the mode of being of a sign" (CP 8.332). And finally, "*Continuity represents Thirdness almost to perfection*" (CP 1.337). The continuum is just the continuity of the semiotic processes.

All objects are simply existing things without any meaning. Therefore, everything which is intelligible must be in a relation or a continuum with others. There are, for example, good human individuals and evil ones, but in order to understand what being human might mean, one must take into account the relation or the continuum between these extremes. The only productive way to think of distinct existents is perceiving them in a relation. Only relations can be objectively grasped and communicated.

Relational thinking is particularly important in mathematics. Positive and negative numbers make sense from a relational point of view only and in order to justify the rules of calculation for negative, fractional or imaginary numbers one has to represent them in relational terms: $3 = 5+x$; $7x = 3$; $5y = 1$, $x^2 + 1 = 0$, etc.

The general number concepts are established first of all by the possibilities of operation. But as long as things remained that way confusion did not end, especially so as up to the end of the 18th century nobody did really understand what an equation really means. The so-called imaginary numbers formed a special stumbling block. Only after Gauss had given a relational interpretation to the imaginary unit in the

frame of the model of the so-called Gaussian number-plane, it became a legitimate mathematical object, which subsequently assumed an important role in mathematics, physics and meta-mathematics (Nahin, 1998). A similar story could be told about the notion of mathematical *function*.

Thirdness as continuity or reasonableness could not be considered in isolation, because of the fundamental importance of the notion of evolution. All our cognitive and bodily capacities and relations to reality depend on evolution. Peirce himself endorsed an evolutionary realism, saying that he “found myself forced by a great many different indications to the conclusion that an evolutionary philosophy of some kind must be accepted” (CP 6.604).

Continuity does not bring about development, change or evolution. If everything would be continuous and homogeneous such that remained no differences, things would become stuck and all knowledge would become analytical, like in the Aristotelian model of science. Evolution and change depend on differences and on chance. Even perception depends on differences of brightness, rather just on light. There might be plenty of light, too much even, and still one might not perceive anything. Continuity is generality, but not the generality of essentialism or set theory in the sense of Plato. Darwin’s “basic insight was that the living world consists not of invariable essences (Platonic classes), but of highly variable populations. And it is the change of populations of organisms that is designated as evolution” (Mayr, 2002, p.92).

Chance and the differences and contradictions on which it depends “must give birth to an evolutionary cosmology, in which all the regularities of nature and of mind are regarded as products of growth” (Peirce, CP 5.102). And further, the endless variety in the world has not been created by law. It is not of the nature of uniformity to originate variation, nor of law to beget circumstance. Let us now explain this a little further. So, what is *Thirdness*?

And with respect to the growth, as well as concerning the foundations of knowledge and our cognitive process the very same holds true. It seems, in fact, very relevant or even essential, which definition is chosen, which perspective is taken or how a problem is represented. How a mathematician defines something is certainly important. Two concepts A and B are not the same, even if contingently or necessarily all A’s are B’s and vice versa, because different concepts help to establish different kinds of relationships and thus influence cognitive development in quite different ways. Two concepts could be extensionally equivalent and yet might function differently within a certain cognitive or communicative context.

Nevertheless, according to Peirce, continuity and lawfulness dominate and *tychism*, or chance

enters as subsidiary to that which is really, as I regard it, the characteristic of my doctrine, namely, that I chiefly insist upon continuity, or *Thirdness*, and, in order to secure to *Thirdness* its really commanding function, I find it indispensable fully

[to] recognize that it is a third, and that Firstness, or chance, and Secondness, or brute reaction, are other elements, without the independence of which *Thirdness* would not have anything upon which to operate (Peirce, CP 6.202).

And Peirce concludes: “Accordingly, I like to call my theory *Synechism*, because it rests on the study of continuity” (Peirce, CP 6.202).

5 The logic of Human Communication and Self-Understanding is Largely Intensional

What matters primarily is meaning or meaningfulness, rather than objective reference. Perhaps your mother’s birthday coincides with that of Hitler or any other horrible person. But, when reporting about the birthday celebrations, you surely would not like to have your story becoming rephrased, by saying, “we were all happy on Hitler’s birthday”, although such a reformulation would be extensionally equivalent. Or if a housewife comes back home from shopping and says to her husband ‘*the shopkeeper told me that you both have birthday together*’, then that’s probably literally untrue, although the shopkeeper and the husband might have been born on the very same day.

The greater part of people’s conversation is taken up with matters of social import and common language is heavily oriented towards human cohesion and the management of social contacts. “we are all social beings and our world is cocooned in the interests and minutiae of every day social life” (Dunbar 1996, p. 4).

A convenient argument in favor of our thesis is the fact of the predominantly rhetorical character of social communication. Aristotle characterized rhetoric as a *techne* of persuasion. Rhetoric, he says, “may be defined as the faculty of observing in any given case the available means of persuasion”. And, “persuasion is clearly a sort of demonstration, based on probable opinion” (Aristotle, 2004).

Rhetoric had always conceived of meanings as functional. The sophists in Plato’s *Athens*, being masters of rhetoric, boasted themselves of their capacity to promote any proposition alternatively as either being true or false. “Man is the measure of all things”, said Protagoras, the most prominent of the sophists. Which man, one might ask?

In fact, it is believed today that the development of language owes much to sociocultural needs and the needs of cooperation. Besides, linguistic description is better suited for describing familiar situations or objects which people oversee and take in intuitively and at a glance.

There is a difference here because the growth of mathematical and scientific knowledge lacks the quasi-automatic character evident in the learning of our mother tongue. Already Galileo had pointed out the differences and inherent problems. In Galileo’s “Assayer” (Il Saggiatore) of 1623, the difference is stated by comparing God’s Word in the Bible, which is adapted to the frame and imagination of the people, on the one hand, and the Great Book of Nature, on the

other hand, which presents the realities of Nature objectively as they are and without regard to human interpreters and their desires or preconceptions. Galileo made the point quite clear against Sarsi, the Jesuit:

I seem to detect in Sarsi a firm belief that, in philosophizing, it is necessary to depend on the opinions of some famous author [...]. Perhaps he thinks that philosophy is a book of fiction written by some man, like the *Iliad*, or *Orlando Furioso* – books in which the least important thing is whether what is written there is true. Mr. Sarsi, this is not how the matter stands. Philosophy is written in this vast book, which continuously lies upon before our eyes (I mean the universe). But it cannot be understood unless you have first learned to understand the language and recognize the characters in which it is written. It is written in the language of mathematics, and the characters are triangles, circles, and other geometrical figures. (Wikisource)

The creation of a formal mathematical language was of decisive significance, not only for the growth of mathematics itself, but also for the constitution of modern science and technology. The concept of a mathematical function, on which the notion of natural law is based, “applied to physical phenomena, appeared for the first time in the literature of mankind in a prescription for gunners in 1546” (Zilsel, 2003, p.110), eighteen years before the birth of Galileo and exactly half a century before the birth of Descartes.

The prevalence of sense or meaning over reference and truth is often addressed under the label “functional semantics” What a pity that Galileo did not know this term! Everybody from booksellers and newspaper agents to real estate firms says nowadays: “Our goal: Making our customers, clients and their families happy, and *content is our top priority*”. “Content” means presenting a picture of life and the world as it is designed in order to define the image of a company. The product is placed in a context with which a maximum large target group can identify. It has nothing to do with content really, it is just functional language. The more content, the less meaning!

An important starting point for functional semantics is the recognition that meaning making occurs in specific contexts and that language use is functional within those contexts. Individuals try by what they say to achieve effects in their social world. But, the most important prerequisite for learning and knowing is the possibility of simultaneously experiencing a body of knowledge, as well as its development or application. Strictly speaking, this possibility is provided by social cooperation only. But signs and texts serve as substitutes for direct cooperation. They represent crystallized cooperation. A written text may serve even as a means of cooperation between my yesterday Ego and myself to-day, by showing me the object of my own writings and thereby helping to correct the one-sided functional view. One might once more get an idea how important the printing press has been to the history of mathematics and of knowledge in general.

If one believes that communication is constituted by the encounter of independent actors who decide to utter their

wishes or commands or whatever, rather than conceiving of communication as a social system, one might also come to believe that signs are essentially determined by the human subject, being just functions of their wishes and desires. However, we cannot “not communicate” and we have no absolute control over what we do communicate in fact.

Peirce’s so-called *Pragmatic Maxim* reproduces the inherent dilemma in epistemological terms. The original 1878 statement of the *Maxim* runs as follows: “Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object” (Peirce CP 5.18). Peirce commented on this about 25 years later, in 1902, in a contribution to Baldwin’s “Dictionary of Philosophy and Psychology”. The Pragmatic Maxim, there he says,

might easily be misapplied, [...]. The doctrine appears to assume that the end of man is action – If it be admitted, on the contrary, that action wants an end, and that end must be something of a general description, then the spirit of the maxim itself, which is that we must look to the upshot of our concepts in order rightly to apprehend them, would direct us towards something different from practical facts, namely, to general ideas, as the true interpreters of our thought. (CP 5.3).

6 Plato and Language

Plato’s philosophy arose from a scandal, namely Socrates condemnation and death in 399 BC. Socrates has obviously been a virtuous and wise man, how could that have remained hidden from the people of Athens? And how could they be brought to recognize or accept truth? Plato blamed the Sophists for this scandal and in his dialogue “The Sophist” he emphasizes that there are different kinds of speech and consequently different forms of human existence, not all of which serve to disclose the truth.

To this purpose he identifies two kinds of activities or arts: productive and acquisitive arts (219, c-d) and two kinds of languages, those which relate to real things and those which refer to other signs (265, b-c). He finally defines the Sophist as somebody who claims to be able to speak about anything without real knowledge and who forces the person who converses with him to contradict himself (268, b). The interesting thing is the claim that different kinds of languages or signs lead to different kinds of human existence.

In Plato’s dialogue *Cratylus* two primary interlocutors of Socrates, Hermogenes and Cratylus, represent two diametrically opposed views on the status of language and in particular two opposed answers to the question about the origin of words (nouns, names, etc.). The positions of Hermogenes and Cratylus have come to be known as ‘conventionalism’ and ‘naturalism’ or essentialism, respectively. In the dialogue, Socrates is asked whether language is a system of arbitrary signs or whether words have an intrinsic relation to the things they signify. Plato’s essential interest was to see whether language serves primarily communicative and rhetorical

purposes, as the Sophists believed and tried to argue, or whether language was essential to cognition and objective knowledge.

An extreme linguistic conventionalist like Hermogenes holds that *nothing* but local or national convention determines which words are used to designate which objects. Cratylus, as an extreme linguistic naturalist, holds that names cannot be arbitrarily chosen in the way that conventionalism describes or advocates, because names or concepts belong *naturally* to their specific objects. The Sophists (Protagoras) were described as conventionalists while Plato's rather anti-conventionalist views lead to the conviction that things have objective natures independent of how they may appear to us, and that there are objectively determined skills for dealing with them.

In the dialogue *Cratylus*, Socrates forces Hermogenes to admit that any purposeful activity – even the efforts of a rhetorician or of a straightforward liar – are objectively constrained, if it wants to be successful. Mind and world are mediated or connected by the system of activities (including its means and goals). It follows from this, in particular, that words or signs, on the one side, and objects and goals, on the other, are not as distinct and separated as one might suppose. To draw an absolute distinction between signs and objects, or between the development and the foundation of knowledge, or finally between, the operative and receptive sides of the human mind, would amount to something like Xenon's paradox of the race between Achilles and the Tortoise (Peirce, CP. 5.157 and 5.181).

7 Conclusion

The answers to the frequent question: *What is human society really?* are commonly framed in terms of two alternative schemas of comprehension: the *paradigm of communication* and the *paradigm of production and technology*. We hope that the forgoing semiotic clarifications are helpful in discussing or even overcoming this dichotomy.

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